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What is claimed is:

1. A transgenic hairless mouse capable of expressing a full length or truncated human elastin promoter.

2. A mouse fibroblast culture derived from the
5 transgenic hairless mouse of claim 1.

3. A method of identifying compounds capable of inhibiting cutaneous photodamage comprising:

(a) applying a test compound to skin of the transgenic hairless mouse of claim 1;

10 (b) exposing the transgenic mouse to UVB radiation, UVA radiation, or solar simulating radiation; and

(c) measuring human elastin promoter activity in the transgenic hairless mouse, wherein a compound which decreases the measured human elastin promoter activity as
15 compared to control transgenic hairless mice inhibits cutaneous photodamage.

4. A method of identifying compounds capable of inhibiting cutaneous photodamage comprising:

(a) contacting the mouse fibroblast culture of
20 claim 2 with a test compound;

(b) exposing the mouse fibroblast culture to UVB radiation, UVA radiation or solar simulating radiation; and

(c) measuring human elastin promoter activity in the mouse fibroblast culture, wherein a compound which
25 decreases the measured human elastin promoter activity as compare to control mouse fibroblast culture inhibits cutaneous photodamage.

5. An in vitro system for identifying agents capable of inhibiting or preventing oxidative damage comprising:

30 the mouse fibroblast culture of claim 2; and

a means for generating reactive oxygen species within the mouse fibroblast culture.

5 adding a test agent suspected of providing protection
against oxidative damage to the mouse fibroblast culture of
claim 2;

10 determining human elastin promoter activity in the mouse
fibroblast culture exposed to the test agent after a selected
time period; and

comparing the determined human elastin promoter activity in the mouse fibroblast culture exposed to the test agent to human elastin promoter activity in a control fibroblast culture wherein a decrease in the determined human elastin promoter activity is indicative of the test agent inhibiting or preventing oxidative damage.

[illegible]